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# Rough Set Theory and Granular Computing



Springer

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ISSN 1434-9922

ISBN 3-540-00574-9 Springer-Verlag Berlin Heidelberg New York

Library of Congress Cataloging-in-Publication-Data applied for

A catalog record for this book is available from the Library of Congress.

Bibliographic information published by Die Deutsche Bibliothek  
Die Deutsche Bibliothek lists this publication in the Deutsche Nationalbibliographie;  
detailed bibliographic data is available in the internet at <<http://dnb.ddb.de>>.

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Springer-Verlag Berlin Heidelberg New York  
a member of BertelsmannSpringer Science+Business Media GmbH  
<http://www.springer.de>

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Printed in Germany

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Typesetting: data delivered by editors  
Cover design: E. Kirchner, Springer-Verlag, Heidelberg  
Printed on acid free paper 62/3020/M - 5 4 3 2 1 0

# Foreword

After 20 years of pursuing rough set theory and its applications a look on its present state and further prospects is badly needed. The monograph *Rough Set Theory and Granular Computing* edited by Masahiro Inuiguchi, Shoji Hirano and Shusaku Tsumoto meets this demand. It presents the newest developments in this area and gives fair picture of the state of the art in this domain.

Firstly, in the keynote papers by Zdzislaw Pawlak, Andrzej Skowron and Sankar K. Pal the relationship of rough sets with other important methods of data analysis - Bayes theorem, neuro computing and pattern recognition - is thoroughly examined. Next, several interesting generalizations of the theory and new directions of research are presented. Furthermore application of rough sets in data mining, in particular, rule induction methods based on rough set theory is presented and discussed. Further important issue discussed in the monograph is rough set based data analysis, including study of decisions making in conflict situations. Last but not least, some recent engineering applications of rough set theory are given. They include a proposal of rough set processor architecture organization for fast implementation of basic rough set operations and discussion of results concerning advanced image processing for unmanned aerial vehicle.

Thus the monograph beside presenting wide spectrum of ongoing research in this area also points out new emerging areas of study and applications, which makes it a valuable source of information to all interested in this domain.

It is my great pleasure to congratulate the Authors and the Editors on this excellent monograph.

Warsaw, July, 2002

Zdzisław Pawlak